

## CLAIMS

What is claimed:

1. A method for controlling a plurality of communication sessions in a wireless communication system, the method comprising:
  - 5 establishing a first communication session at a client device;
  - detecting a second communication session to be connected to the client device;
  - determining whether the second communication session is accepted on the client device;
  - 10 determining whether the first communication session is put on hold on the client device to communicate data associated with the second communication session;
  - if so,
    - intercepting data flow associated with the first communication session; and
    - switching data flow associated with the second communication session to an
    - 15 existing air interface associated with the first communication session.
2. A computer readable medium having stored therein instructions to execute the method of claim 1.
- 20 3. The method of claim 1, wherein the data flow comprises a multimedia data flow.

4. The method of claim 1, wherein the step of intercepting data flow associated with the first communication session comprises intercepting at a serving node the data flow associated with the first communication session.

5 5. The method of claim 4, wherein the serving node comprises a packet data serving node (PDSN) or a gateway general packet radio service support node (GGSN).

6. The method of claim 1, wherein the existing air interface comprises a  
10 plurality of communication channels and switching data flow associated with the second communication session to an existing air interface comprises using an existing communication channel associated with the first communication session for the data flow associated with the second communication session.

15 7. The method of claim 1, wherein the existing air interface comprises a plurality of communication channels and switching data flow associated with the second communication session to an existing air interface comprises:

terminating a first communication channel associated with the first communication session;

20 using a second communication channel on the existing air interface for the data flow associated with the second communication session.

8. A method for controlling a plurality of communication sessions on a mobile terminal in a communication system, the method comprising:

establishing a first communication session at the mobile terminal;  
sending a signaling message to the mobile terminal indicating a second  
communication session to be connected to the mobile terminal;

determining whether the second communication session is accepted and the  
5 first communication session is put on hold on the mobile terminal; and, if so,

sending a policy management control message to a serving node associated  
with the mobile node, the policy management control message including instructions  
to intercept on the serving node a data flow associated with the first communication  
session, and further to use an existing air interface associated with the first  
10 communication session for communicating data associated with the second  
communication session.

9. A computer readable medium having stored therein instructions to  
execute the method of claim 8.

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10. The method of claim 8, further comprising:

intercepting data flow associated with the first communication session at the  
serving node; and

switching data flow associated with the second communication session to the  
20 existing air interface between the serving node and the mobile node.

11. The method of claim 10, wherein the air interface comprises a plurality  
of channels, and switching data flow associated with the second communication  
session comprises using an existing communication channel associated with the first

communication session for communicating the data flow associated with the second communication session.

12. The method of claim 10, wherein the air interface comprises a plurality  
5 of communication channels and switching data flow associated with the second communication session comprises:

terminating an existing communication channel associated with the first communication session; and

setting up a new communication channel for the data flow associated with the  
10 second communication session.

13. A method for controlling a plurality of communication sessions on a mobile node, the method comprising:

communicating data associated with a first communication session on the  
15 mobile node;

receiving a first signaling message on the mobile node, the first signaling message indicating a second communication session to be connected to the mobile node;

notifying a user of the mobile node about the second communication session,  
20 wherein the user is notified using an identifier selected on the mobile node based on a data type associated with the second communication session;

determining if the second communication session is accepted by the user; if  
so,

sending a second signaling message from the mobile node, the second signaling message comprising instructions to put the first communication session on hold and activate the second communication session;

intercepting a first data flow associated with the first communication session  
5 to the mobile node; and

switching a second data flow associated with the second communication session to an air interface associated with the first communication session.

14. A computer readable medium having stored therein instructions to  
10 execute the method of claim 13.

15. The method of claim 13, wherein the second signaling message is sent from the mobile node to a signaling node, the method further comprising:

sending a policy control message from the signaling node to a serving node  
15 associated with the mobile node, wherein the policy control message includes instructions to intercept the first data flow and further to activate the second data flow on the air interface.

16. The method of claim 13, wherein the air interface comprises a plurality  
20 of communication channels and switching the second data flow associated with the second communication session comprises:

terminating a first communication channel associated with the first communication session; and

using a second communication channel on the air interface to communicate data associated with the second communication session.

17. The method of claim 13, wherein the signaling node comprises a session initiation protocol (SIP) proxy server, and the serving node comprises a packet data serving node (PDSN) or a gateway general packet radio service support node (GGSN).

18. A network device for packet session control in a communication network, the network device configured to switch a second communication session associated with a mobile node to an existing air interface responsive to detecting that a first communication session associated with the mobile node is suspended.

19. The network device of claim 18, wherein the air interface comprises a plurality of communication channels, and the network device is configured to terminate data communication associated with the first communication session to the mobile node and further to switch the second communication session to a communication channel associated with the first communication session.

20. The network device of claim 18, wherein the air interface comprises a plurality of communication channels, and the network device is configured to terminate a first communication channels associated with the first communication session and set up a second communication channel over the existing air interface for data communication associated with the second communication session.

21. The network device of claim 18, wherein the network device comprises a packet data serving node (PDSN) or a gateway general packet radio service support node (GGSN).

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22. A system for packet session control comprising in combination:

a mobile node comprising a user-configurable interface, the interface comprising a plurality of new session notification signals for a plurality of data types associated with incoming communication sessions, the mobile node being further  
10 configured to conduct a first communication session and receive a signaling message including instructions to connect a second communication session to the mobile node, and responsive to receiving the signaling message, the mobile node being further configured to determine a data type associated with the second communication session and provide a notification signal associated with the determined data type to a  
15 user associated with the mobile node;

a serving node in communication with the mobile node, the serving node configured to control communication session on the mobile node, the serving node being further configured to switch the second communication session to an existing air interface associated with the first communication session responsive to detecting  
20 that the first communication session is suspended on the mobile node and the second communication session is accepted by the user of the mobile node.

23. The system of claim 22, wherein the serving node comprises a packet data serving node (PDSN) or a gateway general packet radio service support node (GGSN), and the mobile node comprises a mobile router or a mobile client device.

5           24. The system of claim 22, wherein the air interface comprises a plurality of communication channels, and the serving node is configured to terminate a first communication channel associated with the first communication session and set up a second communication channel over the existing air interface.

10           25. The system of claim 24, wherein the serving node is further configured to terminate communication of data associated with the first communication session.

26. The system of claim 22, wherein the air interface comprises a plurality of communication channels and the first communication session is associated with a  
15 first communication channel over the air interface, and the serving node is configured to terminate data communication associated with the first communication session and further to switch data communication associated with second communication session to the first communication channel.